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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,309	05/14/2002	Ulrich Eisele	1995	1960

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EXAMINER

NGUYEN, DONGHAI D

ART UNIT PAPER NUMBER

3729

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/069,309	EISELE, ULRICH	
	Examiner	Art Unit	
	Donghai D. Nguyen	3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/11/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I (Claims 1-7) in the reply filed on October 12, 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

2. The disclosure is objected to because of the following informalities: the word "ak" (page 1, line 29) is not understood. The phrase "(Fig. 1)" page 9 needs to be deleted.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1-7 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "the inner electrode" (claim 1, lines 8-9) lacks antecedent basis. The phrase "similar methods" (claim 7, line 7) is vague and indefinite since it is unclear what the similar methods are. The claimed invention is a method however there are no positive/active steps to perform the claimed invention (i.e. forming individual layers of two continuous strands; winding

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the two strands over one another in claim 1 or guiding the two strands over the deflected rollers in claims 2, 4 or pressing the two strands against the stack, etc.).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being over by JP Application No. 03-271635 to Katsuhiko.

Katsuhiko discloses a method for producing a piezoelectric actuator (6) with a multi-layer structure of layers of a piezoelectric sheet (2a, 2b), and with inner electrodes (3-5) disposed between them, characterized in that the individual layers (2a, 2b) are formed of two continuous strands of the piezoelectric sheet, and the two strands are wound over one another in the form of a double helix to form a hollow-cylindrical stack, thereby enclosing the inner electrode between them (Fig. 3).

7. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,559,387 to Beurrier.

Beurrier discloses a method for producing a piezoelectric actuator (39) with a multi-layer structure of layers of a piezoelectric sheet (201, 202), and with inner electrodes (211-214) disposed between them, characterized in that the individual layers (2a, 2b) are formed of two

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continuous strands of the piezoelectric sheet (200, Fig. 11), and the two strands are wound over one another in the form of a double helix to form a hollow-cylindrical stack, thereby enclosing the inner electrode between them (Fig. 12).

Regarding claim 2, Fig. 12 shows the two strands are guided over deflection rollers (203) in such a way that the overlays of the two strands (201, 202) on the already-wound stack are offset from one another by a predetermined angular amount.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beurrier.

It would have been obvious matter of design choice to choose the predetermined angular of 150 degrees, since Applicant has not disclosed that the claimed specific angle, solves any stated problem or is for any particular purpose and it appears that the invention perform equally well with the predetermined angle of Beurrier.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Katsuhiro or Beurrier in view of US Patent No. 5,241,235 to Culp.

Both Katsuhiro and Beurrier is silent regarding the shape of the strands. Culp teaches the piezoelectric transducer has a trapezoidal cross section for operating stability (Col. 22, lines 45-66). It would have been obvious to one having ordinary skill in the art at the time the invention

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was made to modify either Katsuhiro or Beurrier having the strands have a trapezoidal cross section as taught by Culp for operating stability.

Allowable Subject Matter

11. Claims 4, 5, and 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghai D. Nguyen whose telephone number is (703) 305-7859. The examiner can normally be reached on Monday-Friday (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (703) 308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN



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